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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,278	12/02/2003	Douglas R. Sanquetti	14012-050001/50-03-029	3378

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EXAMINER

SAMPLE, JONATHAN L

ART UNIT	PAPER NUMBER
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3664

NOTIFICATION DATE	DELIVERY MODE
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04/23/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary	Application No. 10/726,278	Applicant(s) SANQUINETTI, DOUGLAS R.	
	Examiner Jonathan Sample	Art Unit 3664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 and 36-40 is/are pending in the application.
4a) Of the above claim(s) 28-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-27 and 36-40 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/8/2004, 5/23/2005, 8/16/2006, 1/15/2008, 1/22/2008, 11/25/2008</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Receipt is acknowledged of the Information Disclosure Statements received on 8 March 2004, 23 May 2005, 16 August 2006, 15 January 2008, 22 January 2008 and 25 November 2008, all of which have been entered in the file.

Response to Arguments

Pursuant to communications filed on 9 January 2009, Applicant elected the invention of Group I, including claims 1-27 and 36-40, drawn to methods for detecting a boundary crossing. This election was made without traverse. Applicant traversed the requirement to elect a species and provided arguments as to why each genus identified in the restriction requirement were not mutually exclusive. Examiner has found the arguments persuasive and the requirement to elect a species has been withdrawn. Currently, Claims 1-27 and 36-40 are pending in the instant application.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Link et al (US 5,270,937).

Regarding claim 17, Link et al teaches a method for detecting a crossing of a boundary, the method comprising retrieving data defining rectangles associated with a boundary (Figure 2 and see column 3, line 66-column 4, line 7 and column 4, lines 31-

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55); identifying a current location of a monitored device (Figure 1, computer 11 and column 4, lines 3-7); and comparing the current location with the rectangles using the data defining the rectangles, wherein a determination that the current location is located within a rectangle indicates a boundary crossing (column 4, lines 31-55).

Regarding claim 18, the method of claim 17 wherein retrieving data defining rectangles associated with the boundary, identifying the current location of the monitored device, and comparing the current location to the rectangles are performed by the monitored device (column 5, line 41-column 6, line 15).

Regarding claim 1, the method of claim 17 wherein the monitored device comprises a vehicle (column 3, lines 37-39).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, 11, 16, 26-27, and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Link et al (US 5,270,937) in view of Ikeda et al (US 6,185,343 B1).

Regarding claims 1,-2, 11, 16, 26-27, 36 and 38-39 Link et al teaches a method for detecting a crossing of a boundary, the method comprising: identifying a boundary within a coordinate system, wherein the boundary is defined by at least one rectangle

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(Figure 2 and see column 3, line 66-column 4, line 7 and column 4, lines 31-55); identifying a set of coordinates associated with a particular location of a monitored device (column 4, lines 3-9). Link et al goes on to teach wherein a boundary crossing is detected if the location of the monitored device is located within the particular rectangle (Figure 7, and column 9, lines 45-55 and column 10, line 65-column 11, line 6). Link et al also teaches wherein the particular rectangle is defined by coordinates of two opposite corners of the rectangle (column 2, lines 48-50, column 5 line 51-column 6, line 2). Link et al also teaches wherein a rectangle of interest is selected from data defining rectangles (Figure 4, and column 5, lines 41-57). Link et al also teaches in the method of vehicle position determination wherein the location of the monitored device is identified/determined (column 4, lines 3-9 and column 4, lines 31-45). It is inherent through the use of the global positioning receiver as taught by Link et al that the longitudinal and latitudinal positions for each set of coordinates may be determined or identified. Link et al also teaches wherein the start and end coordinates of each road segment are compared to the coordinates of two opposite corners of a particular rectangle in order to identify when a road segment is or is not within the particular rectangle (Figures 5 and 6 and column 2, lines 50-60, column 6, lines 36-column 7, line 41). Link et al fails to specifically teach the rotation of the determined coordinates with respect to the particular rectangle, associated with a current location, by an angle of rotation relating to the particular rectangle.

Ikeda et al teaches a position detection system and method wherein a reference image of an object is rotated by a series of rotation angles, creating a plurality of

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templates of the object's rotated position as well as the corresponding rotation angle, which is stored in the system's memory. These templates are then compared to determine a maximum correlation value between the initial reference image and the rotated image to detect a more accurate or precise location (abstract; Figures 2, 13, 14, and 16; column 3, lines 9-22, column 4, lines 51-56, column 9, lines 10-60, column 10, lines 56-64). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include with the vehicle positioning determining device and method as taught by Link et al, rotating the identified set of coordinates by an angle between a selected side of a particular rectangle of the boundary and an axis of the coordinate system; comparing the rotated set of coordinates to a rotated rectangle to determine whether the location of the monitored device is located within the particular rectangle, wherein the particular rectangle is rotated by the angle to form the rotated rectangle such that the selected side of the rotated rectangle is oriented parallel to the axis of the coordinate system; generating the rotated rectangle is by rotating the coordinates of the two opposite corners of the rectangle by the angle; rotating a set of coordinates defining the current location by an angle of rotation associated with the selected rectangle; storing at least two sets of rotated coordinates associated with a predetermined rectangular boundary segment, the at least two sets of rotated coordinates corresponding to at least two sets of original coordinates that define the predetermined rectangular boundary segment in a coordinate system, wherein each set of original coordinates is rotated by an angle of rotation to generate the corresponding set of rotated coordinates prior to storing each set of rotated coordinates, and the at

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least two sets of rotated coordinates define a rotated boundary segment having sides that are parallel to axis of the coordinate system, since Ikeda et al. teaches that the comparison of rotated check images for a check object to a reference image, may be used to give a more accurate or precise vehicle position.

5. Claims 3-5, 7-8, 12-15, 20, 22-25 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Link et al (US 5,270,937) in view of Ikeda et al (US 6,185,343 B1) and in further view of Yokota et al (US 2004/0102898 A1).

The teachings of Link et al and Ikeda et al have been discussed above.

Yokota et al teaches a navigation method and system used to provide area specific information based on the user's current position. Yokota et al goes on to teach wherein the navigation system detects when the user has crossed a boundary (i.e. state border) and provides the user with the appropriate traffic laws and other relevant information relating to the new, adjacent jurisdiction (Figures 2 and 4, and paragraphs 0008, 0010, 0047 and 0051). Yokota et al goes on to teach wherein information may be provided by a remote or central server through a wireless communications network such as Internet (see paragraph 0002). Yokota et al also teaches wherein information relating to the user's position may be stored within the navigation system (Figure 3 and see paragraphs 0041-0044). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include with the vehicle position determining device and method as taught by Link et al, as modified by Ikeda et al, providing the user of the system with area specific information (i.e. traffic laws of a new jurisdiction) based

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on the user's current location and/or when the user crosses a boundary (crosses into a new jurisdiction), since Yokota et al teaches that efficiently providing the user with traffic laws of a new jurisdiction, as well as other relevant area-specific information, the user will be better informed and in turn drive more safely.

6. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Link et al (US 5,270,937) in view of Ikeda et al (US 6,185,343 B1) and in further view of Craport et al (US 5,796, 634).

The teachings of Link et al and Ikeda et al have been discussed above.

Craport et al teaches a method for identifying a geographic region of a geographic area which contains a geographic zone associated with a location. Craport et al goes on to teach wherein rectangular shaped geographic regions are used out of simplicity and the information associated with the rectangular shapes is easy to store. Craport et al also teaches wherein the geographic regions are non-overlapping, but the estimated geographic regions may overlap (abstract; Figures 4 and 9 and column 24, lines 40-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include with the vehicle position determining device and method as taught by Link et al, as modified by Ikeda et al, overlapping rectangles associated with different geographic regions, to acquire information relating to the selected geographic region, since Craport et al teaches that useful information relating to the geographic region or zone may be provided to the user.

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7. Claims 6 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Link et al (US 5,270,937) in view of Ikeda et al (US 6,185,343 B1) and in further view of Kapolka et al (US 2003/0163249 A1).

The teachings of Link et al and Ikeda et al have been discussed above.

Kapolka et al teaches a system and method for determining vehicle mileage, jurisdiction crossing and fuel consumption, and specifically fuel consumption within a jurisdiction (Figures 4 and 10, and see paragraphs 0008, 0037 and 0049-0053).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include with the vehicle position determining device and method as taught by Link et al, as modified by Ikeda et al, a method of determining the fuel consumption within a specified boundary or jurisdiction, since Kapolka et al teaches that the determination of fuel consumption and mileage is an efficient way of tracking the vehicle, and an additional way to be aware of maintenance issues that may arise with the vehicle.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached PTO-892 – Notice of References Cited form.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Sample whose telephone number is (571)270-5925. The examiner can normally be reached on M-F 7-3.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Khoi Tran can be reached on 571-272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. S./

Examiner, Art Unit 3664

15 April 2009

/KHOI TRAN/

Supervisory Patent Examiner, Art Unit 3664